

IN THE CLAIMS:

1. (Original) A line light irradiation device comprising:

multiple light emitting parts each of which is provided with a light irradiating part where multiple optical fibers are thickly arranged in a line or in multiple lines with light leading out end portions of the multiple optical fibers forming a straight line of a predetermined width, and a columnar lens arranged to extend along a direction of the line in front of the light irradiating part in pairs, and that irradiate line light that converges into a straight line; and a holding body that is arranged to face to a work as being an object on which the line light is to be irradiated, on which a monitoring bore is arranged to penetrate in order to monitor the work, and that holds the light emitting parts so that each optical axis face of the line light irradiated from each of the light emitting parts crosses on a predetermined straight line.

2. (Original) The line light irradiation device described in claim 1, wherein each light emitting part is arranged on the holding body so that the optical axis face of the line light irradiated from each light emitting part is arranged radially viewed from the above-mentioned direction of the line.

3. (Currently Amended) The line light irradiation device described in claim 1, [[or 2,]] wherein each columnar lens is arranged generally on a straight line viewed from the above-mentioned direction of the line.

4. (Currently Amended) The line light irradiation device described in claim 1, 2, or 3, wherein the light irradiating part further comprises a pair of pinching plates and the pinching plates hold the light leading out end portions of the multiple optical fibers by pinching them.

5. (Currently Amended) The line light irradiation device described in claim 1, ~~2, 3, or 4~~ wherein a binding part is formed by binding light introducing end portions of the optical fibers and light from a light source is introduced into the binding part.

6. (Original) The line light irradiation device described in claim 5 wherein each length of all or a part of the optical fibers is made to be different so that the binging part is located to deviate to either one of directions with respect to a center line of the light irradiating part.

7. (Currently Amended) The line light irradiation device described in claim 1, ~~2, 3, 4, 5, or 6~~ wherein the light source that introduces light into the optical fibers is a power LED that can continuously flow current greater than or equal to 200mA.

8. (Currently Amended) The line light irradiation device described in claim 1, ~~2, 3, 4, 5, 6, or 7~~ wherein a distance between the light irradiating part and the columnar lens can be varied.

9. (Currently Amended) The line light irradiation device described in claim 1, ~~2, 3, 4, 5, 6, 7, or 8~~ wherein the light emitting part is rotatably around a rotational axis that is parallel to the direction of the line and the rotational angle can be set.

10. (Currently Amended) The line light irradiation device described in claim 1, ~~2, 3, 4, 5, 6, 7, 8, or 9~~ wherein the multiple light irradiating parts are arranged serially along the above-mentioned direction of the line.

11. (Original) The line light irradiation device described in claim 10 wherein each length of the light emitting part is identical.

12. (Currently Amended) The line light irradiation device described in claim 10, [[or 11]] wherein the light source is arranged for each of the light irradiating parts individually.

13. (New) A line light irradiation device comprising:

a light source;

multiple light emitting parts each of which is provided with a light irradiating part where multiple optical fibers with light introducing end portions aligned with the light source, are closely arranged in a line or in multiple lines with light leading out end portions of the multiple optical fibers forming a straight line of a predetermined width

a plurality of columnar lens, each arranged to extend along a direction of the line in front of each of the light irradiating, and each irradiate a respective line light to converge onto a straight line;

a holding body that is arranged to align with an object on which the line light is to be irradiated, including a monitoring bore arranged to enable a monitoring of the work, the holding body holds the light emitting parts so that each optical axis of the line light irradiated from each of the light emitting parts crosses at a predetermined straight line, and

a binding part that is formed by binding each of the light introducing end portions of the optical fibers, wherein

each length of all or a part of the optical fibers are different so that the binding part is located to deviate to either one of directions in a plane view with respect to a center line of the light irradiating part.

14. (New) The line light irradiation device described in claim 13 wherein the light source is a plurality of light emitting diodes.

15. (New) A lighting device for inspecting a surface, comprising:
a holding body; and
a plurality of light emitting parts, each including a first member and a second member, a light source removably mounted to the holding body and a bundle of optical fibers are mounted on the holding body adjacent the light source, the optical fibers are spread into a linear array and fastened between the first member and the second member within the holding body to receive light from the light source at a light receiving end of the optical fibers to provide a line of light from light emitting ends of the optical fibers;

wherein optical axes of each of the plurality of light emitting parts are aligned in the holding body to illuminate a predetermined surface exterior of the holding body.

16. (New) The lighting device described in claim 15 further including a cylindrical rod lens aligned with the light emitting ends of the optical fibers to form the line of light on the predetermined surface.

17. (New) The lighting device described in claim 16 where the light source is a plurality of light emitting diodes.